

CURRICULUM VITAE

Dr. J. SARAVANAN, M.Sc., Ph.D.,
ASSISTANT PROFESSOR
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EDUCATION

May 2016-Dec 2020 : **Ph.D., *Doctor of Philosophy in Chemistry***, School of Chemistry,
Madurai Kamaraj University, Madurai-21, Tamil Nadu, India.
*Thesis Title: “DESIGN AND DEVELOPMENT OF
NANOSTRUCTURED MATERIALS FOR THE APPLICATIONS OF
ELECTROCHEMICAL SENSORS”*
Advisor: Prof. G. Gnana kumar

Nov 2011-Apr 2012 : M.Sc., *Master of Science* in Chemistry, St. Joseph’s College,
Bharathidasan University, Trichy, Tamil Nadu, India
*Thesis Title: “ADSORPTION OF METHYLENE BLUE ONTO
BABOOL TREE BARK ACTIVATED CARBON”*
Scored 61.0% (First Class)

June 2007-Apr 2010 : B.Sc., *Bachelor of Science* in Chemistry, Srinivasan College of Arts and
Science, Bharathidasan University, Perambalur, Tamil Nadu, India,
Scored 73.42 % (First Class with Distinction)

June 2005-Apr 2007 : Higher Secondary School, **Padalur**, Tamil Nadu, India,
Scored 61.23 % (First Class)

June 2002-Apr 2003 : Secondary School, Padalur, Tamil Nadu, India,
Scored 72 % (First Class)

RESEARCH EXPERIENCE

Position(s)/Fellowship(s)	Period	Organization(s)
Ph.D., Research Fellow UGC-NON-NET, New Delhi	May 2016 to Dec 2020	Madurai Kamaraj University, Madurai, Tamil Nadu, INDIA
M.Sc., Research Fellow	June 2010 to April 2012	St. Joseph's College, Bharathidasan University, Trichy

ACADEMIC EXPERIENCE

Positions	Period	Organizations
Head of The Department (HOD)	December 2022 (01/12/2022) Till Now	Subramanya College of Arts and Science, Palani
Assistant Professor, Department of Chemistry,	May 2022 (25-05-2022) to November (30-11-2022)	Subramanya College of Arts and Science, Palani

ADDITIONAL RESPOSIBILITIES :

- 1. Exam Cell Coordinator**
- 2. Cultural Club**
- 3. Corporate and Placement Cell Officer**
- 4. Research and Development Cell**

ACADEMIC HONORS

- ❖ NON-NET Research Fellow - (UGC) New Delhi, India (2016-2019)

RESEARCH HIGHLIGHTS

Published in SCI Journals: 15

Total citations: 172

h-index: 9

Conference Presentations: 6

i10-index: 9

Average impact factors (I.F): 3.1

Total impact factor (I.F): 102.8

ACCOMPLISHMENTS

- ❖ Design and Development of CuO@MnO₂ Core@Shell Architectures on Free-Standing Carbonaceous Biomass for Non-Enzymatic Hydrogen Peroxide Detection.
- ❖ Development of Free-Standing Co-Fe Metal Nanostructures Anchored PVdF-HFP Nanofibers Membrane Effectual as an Electrochemical Probe for Glucose Sensor Applications.

SCIENTIFIC SKILLS: TECHNIQUES/TOOLS ACQUAINTED WITH

- ❖ UV-Vis spectroscopy, Photoluminescence spectroscopy, FT-IR spectroscopy, Cyclic Voltammetry, DPV, LSV, Amperometry *i-t* curve, Chronoamperometry, Chrono potentiometry, Electrodeposition of nanostructures, Electrospinning, Chemical vapour deposition (CVD), Binder free and self-standing electrode fabrication.
- ❖ Analysis and data interpretation of SEM, TEM, XRD, AFM, UV-Vis, PL, FT-IR, RAMAN, XPS and electrochemical results.

SOFTWARE AND COMPUTATIONAL SKILLS

- ❖ Scientific Applications: Chem draw and Origin lab
- ❖ Office Applications: Microsoft office packages
- ❖ Surface Explorer, Image J

STRENGTHS

- ❖ Good communication skill
- ❖ Hard working and effective team perform
- ❖ Passion to learn new things and adaptability to new environment
- ❖ Time and cost-effective execution of projects with motivation

PROJECT MANAGEMENT SKILLS

- ❖ Trained one research scholars and two project scholars from our laboratory and collaborators laboratory in the area of Electrochemical sensors.
- ❖ **Trained one Ph.D., Research Scholars and three project scholars from our laboratory and collaborators laboratory in the area of synthesis and application of “PESTICIDES” novelty work. (I have extensively worked on “PESTICIDES” field)**
- ❖ Strong organizational abilities (Team work) in planning and execution of experiments,
facilities co-ordination, procurement of equipment's and consumables.

From Doctoral Studies (Ph.D)

1. J. Saravanan, A. Vignesh, Syed Shaheen Shah, Md. Abdul Aziz, Mehboobai Pannipara, Abdullah G. Al-Sehemi, Siew-Moi Phang, Fong-Lee Ng, Bakrudeen Ali Ahmed Abdul, G. Gnana kumar, Binder-less and free-standing Co-Fe metal nanoparticles-decorated PVdF-HFP nanofiber membrane as an electrochemical probe for enzyme-less glucose sensors. *Res. Chem. Intermed.*, 2022, 48, 101-116. <https://doi.org/10.1007/s11164-021-04553-0> (I.F: 2.478, Citations: 1)
2. J. Saravanan, Mehboobali Pannipara, Abdullah G. Al-Sehemi, Sara Talebi, Vengadesh Periasamy, Syed Shaheen Shah, Md. Abdul Aziz, G. Gnana kumar, Flower-like CuO/NiO nanostructures decorated activated carbon nanofiber membranes for flexible, sensitive, and selective enzyme-free glucose detection. *J. Mater. Sci: Mater. Electron.*, 2021, 32, 24775-24789. doi.org/10.1007/s10854-021-06927-x (I.F: 2.478, Citations: 1)
3. S. Shakir, J. Saravanan, N. Rizan, K. J. Babu, M. A. Aziz, P. S. Moi, V. Periasamy, G. Gnana kumar, Fabrication of capillary force induced DNA template Ag nanopatterns for sensitive and selective enzyme-free glucose sensors. *Sens. Actuators B Chem.*, 2018, 256, 820-827. doi.org/10.1016/j.snb.2017.10.021 (I.F: 7.10, Citations: 10)
4. G. P. J. Rani, J. Saravanan, S. Sheet, M. A. J. Rajan, Y. S. Lee, A. Balasubramani, G. Gnana kumar, The Sensitive and selective enzyme-free electrochemical H₂O₂ sensor based on rGO/MnFe₂O₄ nanocomposite. *Electrocatalysis* 2018, 9, 102-112. doi.org/10.1007/s12678-017-0418-2 (I.F: 2.39, Citations: 7)
5. J. Saravanan, R. Ramasamy, H. A. Therese, G. Amala, G. Gnana kumar, Electrospun CuO/NiO composite nanofibers for sensitive and selective non-enzymatic nitrite sensors. *New J. Chem.*, 2017, 41, 14766-14771. doi.org/10.1039/C7NJ02073B (I.F: 3.288, Citations: 12)
6. G. Amala, J. Saravanan, D. J. Yoo, A. R. Kim, G. G. Kumar, An environmentally benign one pot green synthesis of reduced graphene oxide based composites for the enzyme free electrochemical detection of hydrogen peroxide. *New J. Chem.*, 2017, 41, 4022-4030. doi.org/10.1039/C6NJ04030F (I. F: 3.288, Citations: 28)

7. G. Venkatesh, J. Saravanan, N. Rajendiran, Cyclodextrin covered organic micro rod and micro sheet derived from supramolecular self-assembly of 2,4-dihydroxyazobenzene and 4-hydroxyazobenzene inclusion complexes. *Bull. Chem. Soc. Japan*, 2014, 87, 283-293. doi.org/10.1246/bcsj.20130255 (I. F: 5. 488)
8. N. Rajendran, G. Venkatesh, J. Saravanan, Supramolecular aggregates formed by sulfadiazine and sulfisomidine inclusion complexes with α - and β -cyclodextrins. *Spectrochim. Acta Part A: Mol. Biomol. Spectros.*, 2014, 129, 157-162. doi.org/10.1016/j.saa.2014.03.028 (I. F: 4.098)
9. N. Rajendiran, R. K. Sankar Narayanan, J. Saravanan, Nanostructures formed by cyclodextrin aminobenzophenones through supramolecular self assembly. *Spectrochim. Acta Part A: Mol. Biomol. Spectros.*, 2014, 127, 52-60. doi.org/10.1016/j.saa.2014.02.024 (I. F: 4.098)
10. N. Rajendiran, J. Thulasidhasan, J. Saravanan, Inclusion complexation of isoprenaline and methyl dopa with α - and β -cyclodextrin nanocavities: spectral and theoretical study. *Spectrochim. Acta Part A: Mol. Biomol. Spectros.*, 2014, 122, 411-421. doi.org/10.1016/j.saa.2013.10.112 (I. F: 4.098)
11. N. Rajendiran, R. K. Sankaranarayanan, J. Saravanan, A study of supramolecular host-guest interaction of dothiepin and doxepin drugs with cyclodextrin macrocycles. *J. Mol. Struc.* 2014, 1067, 252-260. doi.org/10.1016/j.molstruc.2014.03.051 (I. F: 3.196)
12. N. Rajendiran, T. Mohandoss, J. Saravanan, Host interactions of iodocaine and prilocaine with natural cyclodextrins: spectral and molecular modeling studies. *Spectrochim. Acta* 2014. doi.org/10.1016/j.saa.2014.04.123 (I. F: 4.098)
13. N. Rajendiran, R. K. Sankaranarayanan, J. Saravanan, Nanochain and vesicles formed by inclusion complexation of 4, 4'-diaminobenzaniide with cyclodextrins. *J. Experimental Nanoscience*, 2014, 11, 641-660. doi.org/10.1080/17458080.2014.930523
14. N. Rajendiran, S. Siva, J. Saravanan, Inclusion complexation of sulfapyridine with α - and β -cyclodextrins: spectral and molecular modeling study. *J. Mol. Struc.*, 2013, 1054-1055, 215-222. doi.org/10.1016/j.molstruc.2013.09.035.
15. M. J. Jenita, J. Saravanan, N. Rajendiran, Inclusion complexation of dihydroxy benzene derivatives with α - and β -CDs. *J. Ind. Chem. Society*, 2014, 91A, 899-911.

PAPERS PRESENTED IN CONFERENCES

- 1) J. Saravanan, G. Gnana kumar, Flower-like CuO/NiO nanostructured decorated activated carbon nanofiber membranes for flexible, sensitive, and selective non-enzymatic glucose detection, International Conference on “Emerging Trends in Biotechnology for Waste Conversion (ETBWC) 2017” held at CSIR-National Environment Engineering Research Institute (NEERI), Nagpur, Maharashtra, October 8-10, 2017.
- 2) J. Saravanan and G. Gnana kumar, Design and development of CuO/MnO₂ nanocomposite based non-enzymatic hydrogen peroxide sensors. International Conference on "Nanomaterials for Energy, Environment, Catalysis and Sensors" (ICNEECS-15) Madurai Kamaraj University, Madurai, Tamil Nadu, December 11-12, 2015.

SEMINARS/ WORKSHOPS ATTENDED

- 1) J. Saravanan, G. Gnana kumar, Fe-Co metal nanostructures anchored nanofibers for the highly sensitive and selective non-enzymatic glucose sensor applications, One day national symposium on “Recent Developments in Chemistry” held at School of Chemistry, Madurai Kamaraj University, Madurai, Tamil Nadu, India on 4th June 2016.

PERSONAL DETAILS

Full Name	:	Jayachandran Saravanan
Gender	:	Male
Marital Status	:	Single
Date & place of Birth	:	03 rd JUNE 1990, Padalur, (Tamil Nadu), INDIA
Nationality	:	Indian
Permanent Address	:	S/o. J. Saravanan, Maniyankurichi Road, Ambal Nagar, Padalur (Po), Alathur (Tk), Perambalur (Dt), Tamil Nadu, INDIA, 621 109.

REFERENCES

REFERENCE-1

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